



Brent Carstensen

Camanche High School

Careers/Industrial Technology

John Deere Moline Technology Innovation Center

Part I: Overview of Business

- John Deere Company Technology and Innovation Center, Moline Illinois.
- 3D Printer Research and Development. Provide inter-company research and creates fit up parts for John Deere.

Part II: Job Specifics

- Test and Produce parts and materials for John Deere. The Parts produced may be made from an infinite choice of materials.
- The basic Purpose of this department is to develop more cost effective ways to produce parts or fit-up parts for John Deere research and development.

Part III: Introduce the Problem

- My department was tasked with research and development of 3d printing. The challenge was to produce parts that were previously produced through the injection molding process, but we are using 3d printing to examine the cost effectiveness and feasibility for production on a larger scale.
- Not all materials are printable, and we are challenged with finding out which ones can.

Part IV: Background

- Computer design skills
- Estimating cost skills
- Follow chain of command
- Prepare and maintain the 3d machine for a print job
- Monitor for completion accuracy
- Retrieve and process finished parts
- Package and Mail part through inter-office mailing procedures

Part V: Business Solution

- We provide information relevant to the requested materials.
- Determine: Feasibility, Durability, Reliability & Cost Effectiveness.
- Determine if “it” could be printed with 3d methods rather than by normal molding processes.

Part VI: Student Solutions

- Produce “object” out of a cheap available material and compare the outcome to a more expensive material.
- Compare the accuracy and usability along with the cost of producing the “object” with both methods and materials.